

# Translation

## PATENT COOPERATION TREATY

PCT/JP2003/013928



# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

|   |  |  |
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| Applicant's or agent's file reference<br>03-F-087PCT  | FOR FURTHER ACTION See Form PCT/IPEA/416                                   |  |
| International application No.<br>PCT/JP2003/013928  | International filing date (day/month/year)<br>30 October 2003 (30.10.2003) | Priority date (day/month/year)<br>30 October 2002 (30.10.2002) |
| International Patent Classification (IPC) or national classification and IPC<br>C22C 1/02, G06F 17/50 |  |  |
| Applicant<br>NATIONAL INSTITUTE FOR MATERIALS SCIENCE   |  |  |

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 4 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
  - ☐ (sent to the applicant and to the International Bureau) a total of \_\_\_\_\_ sheets, as follows:
    - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

- This report contains indications relating to the following items:

- ☒ Box No. I Basis of the report
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

|  |  |
|--|--|
| Date of submission of the demand<br>05 April 2004 (05.04.2004) | Date of completion of this report<br>25 August 2004 (25.08.2004) |
| Name and mailing address of the IPEA/JP                        | Authorized officer   |
| Facsimile No.  | Telephone No.  |

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/013928

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ The international application as originally filed/furnished
- ☐ the description:  
pages \_\_\_\_\_, as originally filed/furnished  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the claims:  
pages \_\_\_\_\_, as originally filed/furnished  
pages\* \_\_\_\_\_, as amended (together with any statement) under Article 19  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:  
pages \_\_\_\_\_, as originally filed/furnished  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP03/13928

## Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 1, 3-9, 11-14

because:

☒ the said international application, or the said claims Nos. 1, 3-9, 11-14  
relate to the following subject matter which does not require an international preliminary examination (*specify*):

Claims 1, 3-9, and 11-14 are a computer program, which does not require an international preliminary examination by the International Preliminary Examining Authority.

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_\_\_\_\_  
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported  
by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. \_\_\_\_\_

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the  
Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with  
the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☐ see Supplemental Box for further details.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP03/13928

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

## 1. Statement

|                               |        |       |     |
|-------------------------------|--------|-------|-----|
| Novelty (N)                   | Claims | 2, 10 | YES |
|                               | Claims |       | NO  |
| Inventive step (IS)           | Claims |       | YES |
|                               | Claims | 2, 10 | NO  |
| Industrial applicability (IA) | Claims | 2, 10 | YES |
|                               | Claims |       | NO  |

## 2. Citations and explanations (Rule 70.7)

Document 1: JP, 3-191032, A (NATIONAL RESEARCH INSTITUTE FOR METALS), 21 August 1991 (21.08.91), claims & GB, 2241358, A

Document 2: "Ni-ki Chogokincho no Hakkinzoku Genso no  $\gamma/\gamma'$  Sobunpai," (YOKOKAWA ET AL.), Nippon Kinzoku Gakkaishi, September 2002, Vol. 66, No. 9, pages 873-876

Document 3: "Dai 4 Sedai Ni-ki Ichihoko Gyoko Chogokin no Sekkei," (KOBAYASHI, ET AL.), Nippon Kinzoku Gakkaishi, September 2002, Vol. 6, No. 9, pages 897-900

Document 4: JP, 2002-146460, A (DOKURITSU GYOSEI HOJIN BUSSHITSU - ZAIRYO KENKYU KIKO), 22 May 2002 (22.05.02), claims & EP, 1184473, A2 & US, 2002-62886, A1

Document 5: JP, 5-5143, A (GENERAL ELECTRIC COMPANY), 14 January 1993 (14.01.93), claims & EP, 434966, A1 & US, 5151249, A1 & CA, 2029539, A1

Document 6: HARADA, H et al., "Phase Calculation and Its Use in Alloy Design Program for Nickel-Superalloys," Superalloys 1988, 1988, pages 733-742

## Claims 2 and 10

The subject matter of claims 2 and 10 does not involve an inventive step on account of documents 1-6 cited in the ISR. The  $\gamma'$  precipitation strengthened Ni-based superalloy design support device described in documents 1 and 6 and the  $\gamma'$  precipitation strengthened Ni-based superalloy with added platinum-group elements such as Ru described in documents 2-5 belong to closely related technical fields, so employing the  $\gamma'$  precipitation strengthened Ni-based superalloy design support device described in documents 1 and 6 in the  $\gamma'$  precipitation strengthened Ni-based superalloy with added platinum-group elements described in documents 2-5 could easily be conceived by a person skilled in the art.